

# Table of Contents

**Archive Systems.....1**  
    Mass Storage Systems: Lou1 and Lou2.....1

# Archive Systems

## Mass Storage Systems: Lou1 and Lou2

The NAS environment contains three mass storage systems, Lou1 and Lou2, to provide long-term data storage for users of our high-end computing systems. These storage systems are SGI Altix computers running the Linux operating system. The disk space for the three systems combined is about 290 terabytes (TB), which is split into filesystems ranging from 9-30 TB in size.

### Which Lou System I Should Use?

Each user should be able to log into any of the Lou systems, but will only have storage space on the home filesystem of one of them. Follow the steps below to determine which system you should store data on.

1. Log in to either Lou1 or Lou2. For example:

```
your_localhost% ssh nas_username@lou1.nas.nasa.gov
```

2. Type the command "mylou" to find out your mass storage host. For example:

```
lou1% mylou
```

```
Your Mass Storage host is lou2
```

```
Store files there in your home directory, /u/your_nas_username
```

Be aware that Lou1 and Lou2 do *not* share their home filesystems.

3. Use the home filesystem on LouX (where X = 1 or 2) determined by the step above for your long-term storage. For example:

```
pfel% scp foo lou2:
```

### Quota Limits On Lou

For LouX (where X = 1 or 2) that is assigned to you, there are no disk quota limits on your home filesystem. On the other hand, there *are* limits on the number of files (inode):

- 250,000 inode soft limit (14-day grace period)
- 300,000 inode hard limit

See [Policy on Disk Files Quotas for Lou](#) for more information.

## **Data (Un)Migration Between Disk and Tapes**

In addition to the disk space, Lou1 and 2 have a combined 64 LTO-4 tape drives. Each of the LTO-4 tapes holds 800 GB of uncompressed data. The total storage capacity is approximately 10 PB.

Data stored on Lou's home filesystems (disk) is automatically migrated to tapes whenever necessary to make space for more data. Two copies of your data are written to tape media in silos located in separate buildings.

Data migration (from disk to tape) and unmigration (from tape to disk) are managed by the [SGI Data Migration Facility \(DMF\)](#) and Tape Management Facility (TMF).

If you need some data that is only available on tapes, make sure to unmigrate the data from tape to your home filesystem on Lou before transferring it to other systems.

For more tips on how to use Lou more effectively, see [Storage Best Practices](#).